

### AMENDMENTS TO THE CLAIMS

Please replace all prior versions of the claims with the following listing of the claims. Please note that in the amendments to the claims, deletions are indicated by strikethrough (e.g. ~~deletion~~) or double brackets (e.g. [[word]]) and additions to the claims are underlined (e.g. addition).

1. (Currently Amended) A dental implant for insertion into a hole formed in a jaw bone and exposure to an impinging force or impinging forces, the dental implant comprising a threaded lower portion and one or more peripherally extending surfaces which are arranged at an upper/outer portion of the dental implant above the threaded lower portion and are configured to be placed against a jaw bone part at an outlet opening of the hole, wherein each of the one or more peripherally extending surfaces are provided with a pattern of grooves and/or recesses, at least a portion of the pattern of grooves and/or recesses being inclined with respect to a longitudinal axis of the implant and an axis extending perpendicular to the longitudinal axis of the implant, the pattern of grooves and/or recesses including grooves and/or recesses extending in at least two directions of inclination and wherein the grooves and/or recesses have a depth (D) which lies in the range of about 50-100  $\mu\text{m}$  and a width (B) in the range of about 100-150  $\mu\text{m}$  in which greater than 20% of the grooves and/or recesses are configured so that, in the hole, the pattern of grooves and/or recesses extend substantially at right angles to or parallel to, said impinging forces when these impinging forces assume principal directions differing from the longitudinal direction of the implant.

2. (Currently Amended) The dental implant as in claim 1, wherein the pattern of grooves and/or recesses form a closed loop that divides an upper part and a lower part of the upper portion of the implant for preventing ingress of bacteria from the upper portion to a lower portion of the implant ~~have no connection to the upper and/or lower portion.~~

3. (Canceled)

4. (Canceled)

5. (Currently Amended) The dental implant as in claim 1, wherein the upper/outer portion has an inner socket which is polygonal, toothed or with two or more wings, and the

grooves and/or the recesses are arranged at parts of greater material thickness at the upper/~~outer~~ portion.

6. **(Currently Amended)** The dental implant as in claim 1, wherein the pattern comprises straight and parallel groove parts with at least two directions of inclination, the pattern being and are arranged around all or part of the peripheral surface, and in that the groove parts extend relation to a cross section through the surface.

7. **(Previously Presented)** The dental implant as in claim 1, wherein the pattern comprises sinusoidal groove recess parts.

8. **(Previously Presented)** The dental implant as in claim 1, wherein the pattern comprises one or more groups of grooves arranged mutually parallel and with different longitudinal extents.

9. **(Previously Presented)** The dental implant as in claim 1, wherein the peripherally extending surfaces are formed on a flange arrangement.

10. **(Canceled)**

11. **(Canceled)**

12. **(Canceled)**

13. **(Currently Amended)** The dental implant as in claim 1, wherein when the implant is exposed to forces with mutually different directions, ~~and in that~~ a[[.]] first part or parts of the groove and/or recess pattern is/are substantially at right angles in relation to a first force direction and ~~in that~~ a second part or parts of the pattern is/are substantially at right angles in relation to a second force direction ~~and, if appropriate, so on, if a further force direction or force directions present.~~

14. **(Previously Presented)** The dental implant as in claim 9, wherein in said flange arrangement is cylindrical.

15. **(Previously Presented)** The dental implant as in claim 9, wherein in said flange arrangement is conical.

16. **(Previously Presented)** The dental implant as in claim 9, wherein in said flange arrangement is scalloped.

17. **(New)** The dental implant as in claim 1, wherein greater than 20% of a given groove and/or recess is inclined relative to the longitudinal axis of the implant.

18. (New) The dental implant as in claim 1, wherein the grooves and/or recesses of the pattern intersect with each other.

19. (New) A dental implant for insertion into a hole formed in a jaw bone, the dental implant comprising a lower threaded portion and a collar arranged at an upper portion of a dental implant above the lower threaded portion, the collar including a pattern of grooves and/or recesses which are configured to be placed against a jaw bone part at an outlet opening of the hole, at least a portion of the pattern of grooves and/or recesses being inclined with respect to a longitudinal axis of the implant and an axis extending perpendicular to the longitudinal axis of the implant, the pattern of grooves and/or recesses including grooves and/or recesses extending in at least two directions of inclination and wherein the grooves and/or recesses have a depth (D) which lies in the range of about 50-100  $\mu\text{m}$  and a width (B) in the range of about 100-150  $\mu\text{m}$ .

20. (New) The dental implant as in claim 20, wherein the pattern of grooves and/or recesses form a closed system dividing the implant into upper and/or lower parts.

21. (New) The dental implant as in claim 20, wherein greater than 20% of a given groove and/or recess is inclined relative to the longitudinal axis of the implant.

22. (New) The dental implant as in claim 20, wherein the grooves and/or recesses of the pattern intersect with each other.